Package Contents (Basic Unit)

If you ordered Viper SC+ part number:

US & Canada

140-5018-502 VHF 136-174 MHz, 6.25-50 kHz BW, Viper SC+ Basic Unit
140-5018-503 VHF 136-174 MHz, 6.25-50 kHz BW, Viper SC+ Basic Unit - Dual RF Port
140-5028-504 200 215-240 MHz, 6.25-100 kHz BW, Viper SC+ Basic Unit
140-5028-505 200 215-240 MHz, 6.25-100 kHz BW, Viper SC+ Basic Unit - Dual RF Port
140-5048-302 UHF 406.1125-470 MHz, 6.25-50 kHz BW, Viper SC+ Basic Unit
140-5048-303 UHF 406.1125-470 MHz, 6.25-50 kHz BW, Viper SC+ Basic Unit - Dual RF Port
140-5048-502 UHF 450-512 MHz, 6.25-50 kHz BW, Viper SC+ Basic Unit
140-5048-503 UHF 450-512 MHz, 6.25-50 kHz BW, Viper SC+ Basic Unit - Dual RF Port
140-5098-304 900 880-902 MHz, 12.5-100 kHz BW, Viper SC+ Basic Unit
140-5098-305 900 880-902 MHz, 12.5-100 kHz BW, Viper SC+ Basic Unit - Dual RF Port
140-5098-504 900 928-960 MHz, 12.5-100 kHz BW, Viper SC+ Basic Unit
140-5098-505 900 928-960 MHz, 12.5-100 kHz BW, Viper SC+ Basic Unit - Dual RF Port

ETSI/AS/NZ Compliant (All units ETSI/AS/NZ)

140-5018-600 VHF 142-174 MHz, 12.5-25 kHz BW, Viper SC+ Basic Unit
140-5018-601 VHF 142-174 MHz, 12.5-25 kHz BW, Viper SC+ Basic Unit - Dual RF Port
140-5048-400 UHF 406.1125-470 MHz, 12.5-25 kHz BW, Viper SC+ Basic Unit
140-5048-401 UHF 406.1125-470 MHz, 12.5-25 kHz BW, Viper SC+ Basic Unit - Dual RF Port
140-5048-600 UHF 450-512 MHz, 12.5-25 kHz BW, Viper SC+ Basic Unit
140-5048-601 UHF 450-512 MHz, 12.5-25 kHz BW, Viper SC+ Basic Unit - Dual RF Port

Your package contains:

- (1) Viper SC+ IP Router
- (1) 60 in. CAT-5 Ethernet Cable
- (1) Power Cable
- (1) Start Up CD-ROM and Product Documentation Card

Viper SC+ Developer Kits (2 Piece Kit)

If you ordered Viper SC+ part number:

250-5018-500 VHF 136-174 MHz Viper SC+ Developer's Kit (2 Vipers)
250-5028-502 200 215-240 MHz Viper SC+ Developer's Kit (2 Vipers)
250-5048-300 UHF 406.1125-470 MHz Viper SC+ Developer's Kit (2 Vipers)
250-5048-500 UHF 450-512 MHz Viper SC+ Developer's Kit (2 Vipers)
250-5098-300 900 880-902 MHz Viper SC+ Developer's Kit (2 Vipers)
250-5098-500 900 928-960 MHz Viper SC+ Developer's Kit (2 Vipers)

Your package contains:

- (2) Viper SC+ Basic Units
- (2) SMA-Male to BNC-Female Connectors
- (2) SMA Female to BNC-Male Connectors
- (2) TNC-Male to BNC-Female Connectors
- (2) Mini Circuits 5 W 20 dB Attenuators
- (2) Flex Rubber Duck Antennas (VHF, UHF, or 900 MHz)
- (2) 120 V AC to 13.8 V DC 4 Amp Power Supply

Viper SC+ Developer Kits (3 Piece Kit)

If you ordered Viper SC+ part number:

250-5018-510 VHF 136-174 MHz Viper SC+ Developer's Kit (3 Vipers)
250-5028-512 200 215-240 MHz Viper SC+ Developer's Kit (3 Vipers)
250-5048-310 UHF 406.1125-470 MHz Viper SC+ Developer's Kit (3 Vipers)
250-5048-510 UHF 450-512 MHz Viper SC+ Developer's Kit (3 Vipers)
250-5098-310 900 880-902 MHz Viper SC+ Developer's Kit (3 Vipers)
250-5098-510 900 928-960 MHz Viper SC+ Developer's Kit (3 Vipers)

Your package contains:

- (3) Viper SC+ Basic Units
- (3) SMA-Male to BNC-Female Connectors
- (3) SMA Female to BNC-Male Connectors
- (3) TNC-Male to BNC-Female Connectors
- (3) Mini Circuits 5 W 20 dB Attenuators
- (3) Flex Rubber Duck Antennas (VHF, UHF, or 900 MHz)
- (3) 120 V AC to 13.8 V DC 4 Amp Power Supply

Kit Components

	Description	Item
Basic Unit	Viper SC+ IP Router	
	60 in. Cat 5 Ethernet Cable	
	Power Cable	
2- and 3-Piece Kit Additional Items	SMA Male to BNC Female Connector	
	SMA Female to BNC Male Connector	
	TNC Male to BNC Female Connector	
	Mini Circuits 5 W 20 dB Attenuator	
	Flex Rubber Duck Antenna (VHF, UHF, or 900 MHz)	
	120 VAC to 13.8 VDC 4 A Power Supply	
	Product Documentation	

http://www.calamp.com/help/devicefirmware/desktop/Viper_SC_Firmware_Files_and_Instructions.htm

Any changes or modifications not expressly approved by the party responsible for compliance (in the country where used) could void the user's authority to operate the equipment.
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Quick Start Guide

Viper SC+™

INTELLIGENT IP ROUTER FOR LICENSED SPECTRUM

This quick start guide covers bridge configuration and basic operation for the Viper SC+ Series. For advanced configuration, or to configure your device in router mode, please refer to the user manual.

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Quick Start Guide

Viper SC+™

INTELLIGENT IP ROUTER FOR LICENSED SPECTRUM

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PN 004-5008-000 Rev. B
Revised: March 2014

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PN 004-5008-000 Rev. B

All specifications are typical and subject to change without notice.

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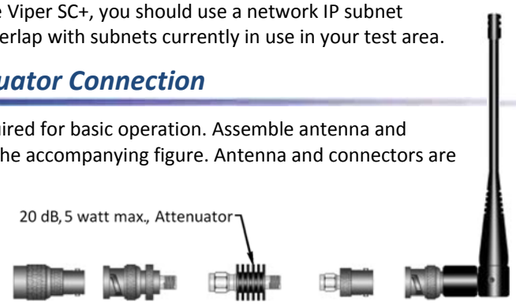
Setup and Configuration

These instructions allow you to set up a Viper SC+ IP Router to verify basic unit operation and experiment with network designs and configurations. To eliminate unnecessary disruption of traffic on the existing network while you become familiar with the Viper SC+, you should use a network IP subnet address that does not overlap with subnets currently in use in your test area.

Antenna & Attenuator Connection

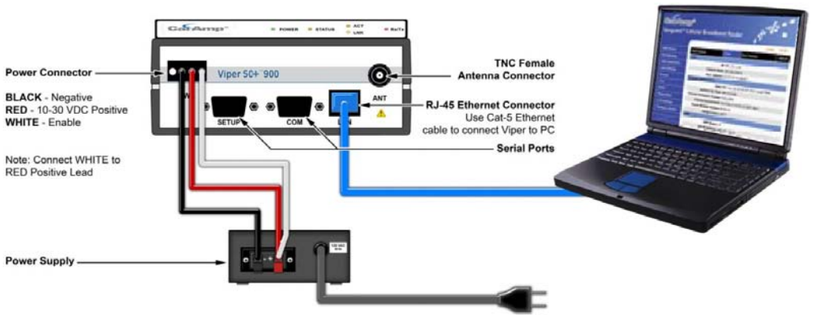
An Rx/Tx antenna is required for basic operation. Assemble antenna and connectors as shown in the accompanying figure. Antenna and connectors are sold separately.



Note: It is important to use attenuation between all demo units in the test network to reduce the amount of signal strength in the test environment.

Device Connections

Refer to the diagram below for proper device connections.



Connect an Ethernet cable to the **LAN** port of the Viper SC+ and connect the other end into the Ethernet port of your PC.

Primary power for the Viper SC+ must be within 10-30 V DC and must be capable of providing:

- 10 W supply for Tx at 1 W
- 40 W supply for Tx at 5 W or
- 60 W supply for Tx at 10 W

Viper SC+ Demo kits include a power supply with spring terminals. Observe proper polarity when connecting the cables to the power supply. The white wire must be connected to the red wire or B+ supply, as shown in the above figure.

Accessing the Viper SC+ Web Server

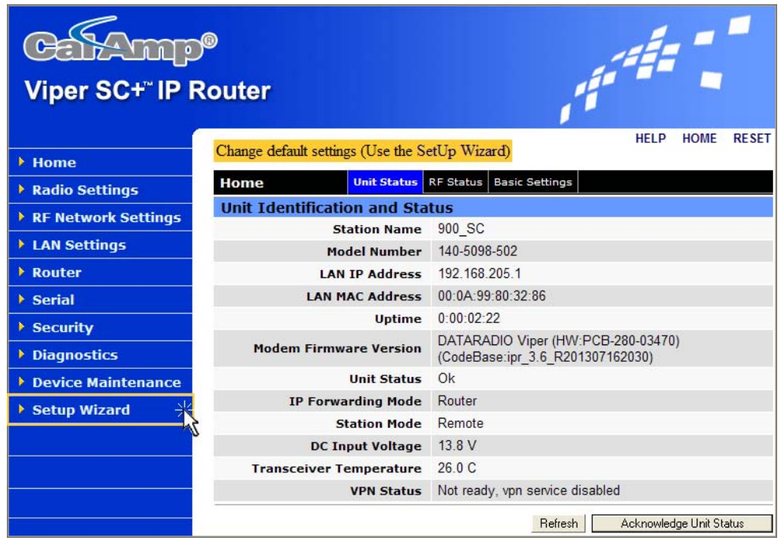
The Viper SC+ is configured via a Web-browser interface and contains a DHCP server which will automatically assign an IP address to your PC, however in some cases it may be necessary to change the network settings on the PC to accept the IP address assigned by the Viper DHCP server.

Step 1 Enable a network connection with the following LAN settings. In the Internet Protocol (TCP/IP) Properties window, select **Obtain an IP address automatically** and **Obtain DNS server address automatically**. Click **OK** and close.

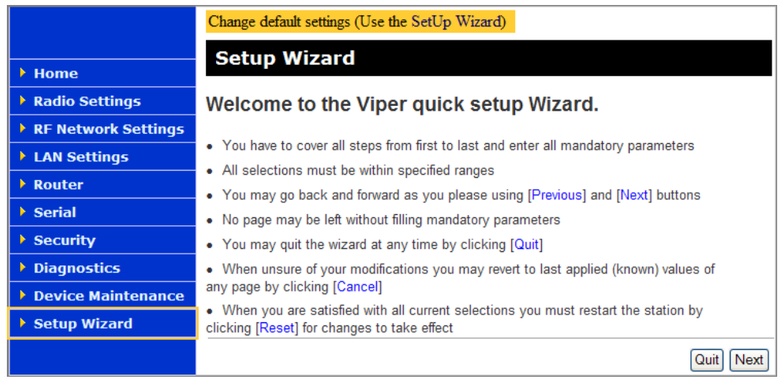
Step 2 Open a Web browser and enter **192.168.205.1** in the Address bar. When the connection Login window appears, enter the User name: **Admin** and the Password: **ADMINISTRATOR** (both Admin and ADMINISTRATOR are case-sensitive) and click **OK**.

Viper SC+ Web Interface and Setup Wizard

Once you have logged in you will see the Home page of the Viper Web Interface as shown in the following figure. Arranged vertically on the left side is the main navigation menu.



For quick setup, select **Setup Wizard**, the bottom selection of the main menu (to the left). The introductory page of the Viper SC+ Setup Wizard is displayed as shown in the following figure. Read the instructions carefully.


Home
Radio Settings
RF Network Settings
LAN Settings
Router
Serial
Security
Diagnostics
Device Maintenance
Setup Wizard
Change default settings (Use the SetUp Wizard)
Setup Wizard
Welcome to the Viper quick setup Wizard.
You have to cover all steps from first to last and enter all mandatory parameters
All selections must be within specified ranges
You may go back and forward as you please using [Previous] and [Next] buttons
No page may be left without filling mandatory parameters
You may quit the wizard at any time by clicking [Quit]
When unsure of your modifications you may revert to last applied (known) values of any page by clicking [Cancel]
When you are satisfied with all current selections you must restart the station by clicking [Reset] for changes to take effect
Quit
Next

The Setup Wizard consists of five (5) steps. Each step is presented as a single page with a few simple options to fill in or select from. Each of the five pages for each step of the Setup Wizard contain the basic configuration settings that are most commonly required to select or change to set up the Viper SC+ IP router for specific functionality.

Instructions for each of these steps are provided on the web page for the step.

The Setup Wizard steps are as follows

Step ① **Identification and function:** Station Name and Mode settings: Station Name, IP Forwarding Mode, Relay Point, Access Point, Multi-Speed Mode.

Step ② **Network Address & Subnet:** IP Address, Network Mask, Default Gateway.

Step ③ **Radio Settings:** Bandwidth, Data and Control Packet Bit Rate, Rx & Tx Frequency ranges , Tx Power.

Step ④ **Encryption:** Enable or Disable, and Encryption Pass Phrase.

Step ⑤ **Setup completion:** Apply / Save Configuration; if necessary, reboot / reset Viper.

Note: Some settings (indicated by a yellow alert symbol ⚠) in the Setup Wizard web pages require a reset of the Viper before they will take effect. If you change any of these settings, be sure to reboot the Viper when you have finished the Setup Wizard.

Setup Wizard Quick Setup

Enter the following in the Setup Wizard for quick setup. Click **Next** as you complete each page in sequence. (You can click Previous to review settings in a previous page if needed.)

Step ① Assign a unique Station Name and select how unit will function.
- **Station Name:** Assign a unique Station Name
- **IP Forwarding Mode:** Bridge mode
- **Relay Point:** No
- **Access Point:** No
- **Multi-Speed Mode:** Disabled

Step ② Default configuration — To monitor or change configuration remotely, each unit requires a unique IP address. When configuring more than one unit, be sure to increment IP addresses. (Enter this address in the browser after reset.)
- **IP Address:** 192.168.205.1 is the default setting; see above.
- **Network Mask:** 255.255.255.0
- **Default Gateway:** 0.0.0.0

Step ③ Verify FCC License before completing this step
- **Bandwidth:** Select channel bandwidth from drop-down menu
- **Data and Control Bit Rate:** Select rate from a down menu
- **Rx Frequency:** Enter Rx Frequency
- **Tx Frequency:** Enter Tx Frequency
- **Tx Power:** Enter 5 W

Step ④ Viper SC+ offers AES-128 bit encryption to protect your data from intrusion. We recommend encryption be enabled for your wireless network. The encryption phrase / key must be the same for all devices on your network.
- **Encryption:** Enabled
- **Encryption Pass Phrase:** Enter an encryption phrase

Step ⑤ Click **Done**. Your unit is now functioning in Bridge Mode.

Note: If you changed any parameters marked with the yellow alert symbol (⚠) you must power-cycle the unit. Use the **Reset** link provided.

Check For Normal Operation

To simulate data traffic over the radio network, use the PC connected to the Viper SC+ Ethernet port to Ping each unit in the network multiple times. For more information about configuring the Viper SC+, refer to the Viper SC+ User Manual (PN 001-5008-000).

Technical Support

For assistance with this product, contact CalAmp technical support.

Email productsupport@calamp.com
Phone 1.507.833.6701, Option 2 for Fixed, Narrowband, and Radio Modem products

Or visit the Support section of our website at http://www.calamp.com/product-support.

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